What is claimed is:

1. An evaporator having a plurality of laminated tubes, a refrigerant passage formed in each tube, an inlet header chamber which is in communication with one end of the refrigerant passage, and an outlet header chamber which is in communication with the other end of the refrigerant passage, the evaporator comprising:

an inner header chamber defined in the inlet header chamber by a partition wall;

an outer header chamber defined by an outer periphery of the inner header chamber by the partition wall, the outer header chamber being in communication with the refrigerant passage; and

a common refrigerant supplier formed by an assembly of the inner header chambers, wherein

the refrigerant supplier stores refrigerant having substantially the same liquid level in all the inner header chambers.

2. The evaporator according to claim 1, further comprising

a plurality of refrigerant through holes formed in the partition wall, the refrigerant through holes being formed at two levels, wherein

the refrigerant which flows out from the refrigerant supplier is supplied to the refrigerant passages through the outer header chambers.

3. The evaporator according to claim 2, wherein

the refrigerant supplier is disposed above the refrigerant passage.

4. The evaporator according to claim 3, wherein

the refrigerant through holes are disposed higher than a lowermost position of the inner header chamber.

5. The evaporator according to claim 3, wherein

the refrigerant through holes are disposed above and below a center position of the inner header chamber.

6. The evaporator according to claim 3, wherein

the refrigerant through holes are lower holes located below the center position of the inner header chamber, intermediate holes located at substantially the same level as the center position, and upper holes located above the center position.

7. The evaporator according to claim 6, wherein

the lower holes are provided at a liquid level at which a cross section area of the inner header chamber occupied by liquid phase refrigerant is one-third of the cross section area of the inner header chamber or less.

8. The evaporator according to claim 6, wherein

the refrigerant through holes are provided on a one-pair by one-pair basis at locations opposed to each other at the same level.

9. The evaporator according to claim 2, wherein

the refrigerant supplier is disposed below each refrigerant passage.

10. The evaporator according to claim 9, wherein

the refrigerant through holes are located below an uppermost position of the inner header chamber.

11. The evaporator according to claim 9, wherein

the refrigerant through holes are disposed above and below the center position of the inner header chamber.

12. The evaporator according to claim 9, wherein

the refrigerant through holes are lower holes located below the center position of the inner header chamber, intermediate holes located at substantially the same level as the center position, and upper holes located above the center position.

13. The evaporator according to claim 12, wherein

the refrigerant through holes are provided on a one-pair by one-pair basis at locations opposed to each other at the same level.